

## **EASY MOP**

### Related Patent Application

This patent application claims the benefit of Provisional Application, U.S. Serial No.60/269,564, filed February 16, 2001, entitled " EASY MOP " by Jianhua Fan.

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The present invention relates to a mop, more particularly to a easy twisting mop for saving man power and keeping user's hands dry.

#### 2. Description of the Prior Art

Most of the existing mop have no bow sharped portion or called extended arm of force on it,so that, users have directly to use hands to squeeze water out of the mop.

Some exinting mop apparatus has been improved to keep hands dry while user twist it, but the mops have no bow sharped portion or extended arm of force on it, so that users can not save their power, and not easy to squeeze water out of the mop, especially for female.

It can be seen then that there is a need for a mop which easily squeeze water out of the mop, meanwhile save man power and keeps hands dry. The present invention provides a solution to solve the above and other related problems.

## SUMMARY OF THE INVENTION

The present invention relates to a mop, more particularly to a easy twisting mop to easily squeeze water out of the mop , yet saves man power and keeps hands dry.

The present invention discloses a easy mop which allows user easy to twist a wet mop, meanwhile saves man power and keeps hands dry.

In one embodiment of the present invention, a easy mop includes a long handle, the long handle having three portions: an upper portion, a bow sharped portion and a lower portion; a mass of absorbent material, one end of the mass of absorbent material fixed on the lower end of the long handle, the other end of the absorbent material fixed on a sleeve, the lower portion of the long handle through into the sleeve, a twisting handle disposed on the sleeve, the sleeve can be moved along the lower portion of the long handle. Two parts: bow sharped portion and the twisting handle, made the extended arm of force to save man power and keeps hands dry while user twists it , the twisting handle is adjustable, a bow holder may be disposed on the bow for easily turning around the bow while twisting the mop.

Still in one embodiment of the present invention, a easy mop base on the first embodiment includes a sleeve holder and a sleeve control, the sleeve holder and control disposed on the lower portion of the long handle for easily twisting the mop. The sleeve control control the sleeve moving distance and release the sleeve from the sleeve holder while push the control button.

In another embodiment of the present invention, a easy mop includes a long handle, the long handle having three portions: an upper portion, a bow sharped portion, and a lower portion; a mass of absorbent material, a first (absorbent material) holder, and

a metal bar, the metal bar includes: a main bar, an extension bar, a second (absorbent material) holder, and an extension bar handle; the sharp of first and second holders can be different, also the second holder can be disconnected from the main bar. Two holes: the first hole disposed on the long handle between the bow sharped portion and the lower portion, the second hole disposed on the center of the first holder, the main bar through the first hole, the lower portion, then the second hole. Each of the absorbent material turned around the second holder, two end of the each absorbent material then fixed on the first holder. While the mop in use, the metal bar being pulled up and holded by a metal bar holder, while the mop is going to squeeze water out the mop, pulled down the metal bar, one hand hold the bow sharped portion, another hand hold the extension bar handle, the water being easily squeezed out from absorbent materials when user turn around the extension bar.

Further, in one embodiment, the mop having a big sleeve, the big sleeve having a side wall, a top wall, a center hole, and a multiple wing like piece; the center hole disposed on the top wall for lower portion passing the big sleeve; the multiple wing like piece disposed on the inside wall of the big sleeve, when the big sleeve being pulled down and turned around, the water in the absorbent material being twisted out by the multiple wing piece; a twisting handle disposed on the big sleeve for saving man power, the twisting handle is adjustable. While twisting the mop, one hand hold the twisting handle, another hand hold the bow sharped portion and turn it around, the water in the absorbent material being twisted out by the multiple wing piece, while the mop in use, pull up the big sleeve and holded by the sleeve holder.

### BRIEF DESCRIPTION OF THE DRAWINGS

A better understanding of the construction and operational characteristics of a preferred embodiment can be realized from a reading of the following detailed description, especially in light of the accompanying drawings in which like reference numerals in the several views generally refer to corresponding parts.

Figure 1 is a front view of one embodiment in twisting position of a easy mop in accordance with the principles of the present invention.

Figure 2 is a side view of the mop shown in Figure 1.

Figure 2a is a regular mop.

Figure 3 is a front view of the easy mop in using position shown in Figure 1.

Figure 4 is a side view of the easy mop in using position shown in Figure 1.

Figure 5 is a front view of the easy mop in twisting position with sleeve control shown in Figure 1.

Figure 6 is a side view of the easy mop in twisting position with sleeve control shown in Figure 1.

Figure 7 is a cross-sectional view of a enlarged part of long handle, a sleeve, a twisting handle, sleeve control and holder shown in figure 6.

Figure 8 is a front view of the parts shown in Figure 6.

Figure 9 is a side view of a second embodiment in twisting position of a easy mop in accordance with the principles of the present invention.

Figure 10 is a side view of the easy mop in using position shown in Figure 9.

Figure 11 is a side view of the easy mop in twisting position with different size of the absorbent material holders shown in figure 9.

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Figure 12 is a side view of the easy mp in using position shown in Figure 11.

Figure 13 is a side view of a third embodiment in using position of a easy mop in accordance with the principles of the present invention.

Figure 14 is a cross-sectional view of a enlarged big sleeve shown in Figure 13.

Figure 15 is a bottom view of the big sleeve shown in figure 14.

Figure 16 is a side view of a regular mop with a long hand holder, a sleeve with a twisting handle.

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## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention relates to a mop, more particularly to a easy twisting mop for saving man power and keeps hands dry while user twists it.

The present invention discloses a easy twisting mop which allows user to save man power and keeps hands dry, meanwhile, water being easy squeezed out of the mop. Further, the present invention discloses a mop having a bow or an extension handle on the long handle, and a sleeve with a twisting handle or a metal bar, the twisting handle may adjustable. The bow or extension handle combine with the twisting handle or metal bar, twinting a mop become very easy.

The present invention also discloses that the mop may includes a sleeve control and a sleeve holder for easily twisting the mop, and the mop may includes a bow holder for easily turn around it. Furthermore, the present invention discloses that a mop includes a metal bar, the metal bar includes: main bar, extension bar, extension handle, and a second (absorbent material ) holder. The main bar through a hole which disposed on the long handle, the lower portion, and the hole on the center of the absorbent material holder. The second holder can be assembled to or disassembled from the main bar.

In the following description of the exemplary embodiment, reference is made to the accompanying drawing which form a part hereof , and in which is shown by way of illustration the specification embodiment in which the invention may be practiced. It is to be understood that other embodiments may be utilized as structural changes may be made without departing from the scope of the present invention.

In Figure 1 to 4, there is generally illustrated by reference numeral 1, one embodiment of a easy mop in accordance with the principles of the present invention.

The easy mop 1 includes a long handle 2, a mass of absorbent material 4, an absorbent material holder 6 ( may not includes the holder 6, if so, the mass of absorbent material being fixed on the lower end of the long handle ), and a sleeve 8. The long handle 2 having three portion: an upper handle 3, a lower handle 7, and a bow 5. The absorbent material holder 6 connected to the lower end of the long handle and one end of the absorbent material being fixed on the holder 6. The sleeve 8 hold another end of the absorbent material, and a twisting handle 10 connected to the sleeve. A sleeve holder 24 disposed on the lower handle 7, the sleeve 8 can be moved up and down on the lower handle 7. Figure 1 is in the twisting position. Figure 2 is a side view of the mop shown in Figure 1. Figure 3 is a front view and Figure 4 is a side view in using position of the mop shown in Figure 1.

In Figure 5, a sleeve moving control 22 and holder 24 illustrated, in Figure 6, a bow holder 26 for easily turning the bow around illustrated.

Figure 7 shown how the sleeve holder works. while push the control button 22, the sleeve 8 being released from the holder 24. Figure 8 is a front view of the sleeve, twisting handle 10, and sleeve moving control shown in Figure 7.

In Figure 9, a second embodiment of a easy mop in accordance with the principles of the present invention is illustrated. The mop 50 includes a long handle 2, a mass of absorbent material 4, a first (absorbent material) holder 6, and a metal bar 30. The long handle 2 having three portion: an upper handle 3, a lower handle 7, and a bow 5, one hole 16 disposed on the long handle. The first holder 6 being connected to the lower end of the long handle, the ends of the absorbent material being fixed on the holder 6, a hole 18 disposed on center of the holder 6. The metal bar 30 includes main bar 33, extension

bar 31, extension bar handle 32, and a second (absorbent material) holder 36, the second holder 36 can be assembled to or disassembled from the main bar, the main bar through the hole 16, the lower handle 7, and the center hole 18 on the absorbent material holder 6, then connect with the second holder 36. Figure 10 is a side view in using position of a easy mop shown in Figure 9 and the metal bar 30 being holded by the holder 38 illustrated.

Figure 11 to 12 shown the different style of the two holders 37 and 39.

Figure 13 to 15 illustrate a third embodiment of a easy mop 60 in accordance with the principles of the present invention. Similar to the easy mop 1 shown in Figure 1 to 8, the mop 60 includes a long handle 2, a mass of absorbent material 4 (maybe includes an absorbent material holder 6, if not, the mass of absorbent material being fixed on the lower end of the long handle ), and a sleeve 40. The sleeve 40 is bigger than the sleeve 8, and the sleeve 40 does not hold the absorbent material. The sleeve 40 having a side wall, a top wall, and a center hole disposed on the top wall, a twisting handle 10 is adjustable, a multiple wing piece 45 disposed on the inside wall of the sleeve, while the mop is in use, the sleeve 40 been pulled up and hold by the holder 24, while twisting the mop, push the control button 22 to release the sleeve 40 and pull down to lower position, hold the twisting handle 10, turn the bow around, the water in the absorbent material being easily squeezed out by the multiple wing like piece.

In the present invention, the twisting handle 10 and the bow 5 on the long handle in physics mean that the arm of force of the mop has been extended, so that, man power has been saved while twisting the mop. For example, if the arm of force of a regular mop is one inch ( distance a to b in Fig. 2a, arm of force of most regular mop less than one inch ), and the arm of force of the easy mop in present invention is 3 inches ( the distance between the point A and B in Fig. 2 ), while twisting a mop, if users use 30 pounds force

to squeeze water out of the mop, users need only 10 pounds force to squeeze the same water out of the easy mop, clearly, use easy mop, users can save two thirds power in this example. Under the extended arm of force principle, the easy mop can be modify to: a mop having a twisting handle 10, and a long handle holder 66 ( see Figure 16, numeral 88, the long handle holder instead of a bow ), user can still save power even if the mop is not easily to be turned around to squeeze water out of the mop.

The forgoing description of the exemplary embodiment of the invention has been presented for the purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise form disclosed. Many modications and variations are possible in light of the above teaching. It is intended that the scope of the invention be limited not with this detailed description, but rather by the claims appended hereto.

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